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ART. XII.—*Notes on the production of Tea in Assam, and in India generally.*—By J. C. MARSHMAN, Esq.

[*Read Saturday, 18th January, 1862.*]

THE subject of the cultivation of tea in Assam was first brought under the notice of the Committee of Trade and Agriculture of this Society on the 10th November, 1838, when “An Account of the Manufacture of Black Tea as practised in Upper Assam by the Chinamen sent thither for that purpose,” which had been drawn up by Mr. W. Bruce, the Superintendent of the Tea Culture, on the part of the Indian Government, was presented by the Secretary of the East India Company.

At a subsequent meeting, held on the 15th December, a specimen of the “Tea grown and prepared in the British possessions in Upper Assam,” was presented by the Chairman of the Court of Directors of the East India Company.

On that occasion, Dr. Royle said he thought it of very good quality, and a highly favourable specimen of what was likely to be a still more successful culture. He stated that from the tea plant being distributed over 20 degrees of latitude in a country of extreme climates—that is, where the cold of winter and the heat of summer were both excessive in degree—there could be no doubt of its growth in various parts of the Himalaya, where every diversity of climate was to be found. He said that Upper Assam was totally unknown when he wrote his essay, and, though perceiving the eligibility of making the experiments in Nepal, he had only pointed out such places in Kemaon, Gurwāl, and Sirmore.

It will be interesting therefore to resume the consideration of the subject, and to trace the progress which has been made in the last twenty years in the cultivation of tea, not only in Upper Assam, but also in other districts in the Presidency of Bengal, the north-west provinces, and the Punjab.

The Government of India led the way in this experiment; twenty-five years ago Mr. Bruce was appointed the official

superintendent of the experimental gardens which were established in Assam, and seed and artificers were imported from China. But Government announced at the same time that they were prepared to hand over the undertaking and the establishments to any association which appeared to be in a position to carry out the experiment with vigour.

In the year 1839, the Assam Company was formed in London, with a branch in Calcutta, for the purpose of prosecuting the cultivation of tea in Assam, with a nominal capital of £500,000, of which only £200,000 was called up; and the Government nurseries, with all the apparatus, were transferred over to them. But unfortunately the whole of the subscribed capital was in a short time absorbed and extinguished in the costly experiments which were made, and the Company were reduced to the necessity of borrowing £7,000 from their bankers. Not only were their operations crippled for want of resources, but the undertaking was on the verge of extinction, when it was happily rescued from insolvency, and enabled, simply on the strength of this small borrowed capital, to creep up gradually to its present height of prosperity, when the local assets exceed in value the capital which was sunk, and a dividend of 12 per cent. delights the shareholders. This happy result is due in no small degree to the exertions of the superintendent in India, M. de Mornay.

The progressive improvement of the prospects of the Company will be seen from the following statement :

The gross proceeds of Assam Tea sold in London and Calcutta in—

	£		£
1847 amounted to	11,300	1851 amounted to	47,200
1848 " "	15,200	1855 " "	55,000
1849 " "	19,500	1856 " "	71,000
1850 " "	21,200	1857 " "	66,200
1851 " "	25,100	1858 " "	80,700
1852 " "	30,000	1859 " "	76,800
1853 " "	39,000	1860 not yet ascertained.	

The nurseries in Assam were originally stocked with seed from China, but it has been found more advantageous to confine the cultivation to the indigenous plant of the province. All the tea therefore which is sent from Assam to London is the produce of the shrubs which were found growing wild in the country, though they have been not a little improved by care in the cultivation.

The young plants are reared in nurseries, and when sufficiently

mature, are transplanted to the fields and planted about six feet apart. It is simply necessary that the soil should be well hoed and kept completely free from weeds, and that the shrubs should be trimmed, to counteract the injurious tendency to shoot upwards.

They begin to yield in the third year, and attain the maximum of produce in the seventh, after which there has been as yet no diminution in the quantity or quality of the return.

At the commencement of their operations the Company prepared a quantity of green tea, but the experiment was speedily abandoned, and their operations have been limited to the production of black tea, of which there are six varieties :

1. Flowery Pekoe.
2. Orange Pekoe.
3. Pekoe.
4. Souchong—1st and 2nd Class.
5. Congou—1st and 2nd Class.
6. Bohea, and Dust.

All these varieties are gathered from one and the same plant. The finest and most delicate leaves yield the Flowery Pekoe, the largest and coarsest the Bohea, while the other descriptions consist of intermediate qualities. All the leaves of every kind are culled at once, and thrown promiscuously into a heap for two or three days, which promotes a gentle fermentation. They are then dried in cast-iron pans over a charcoal fire. The leaves gathered at the out-stations are subjected to the same process, and then transmitted to Nuzcera, the head-quarters of the Company. There they are sorted by means of sieves of different degrees of fineness.

The leaf which passes through a sieve with the smallest interstices is the first quality, or the Flowery Pekoe, and the denomination of the tea is determined by the number of the sieve through which the dried leaves will pass.

One of the greatest improvements which has been made latterly, is the invention of machinery, by M. de Mornay, the general superintendent, which enables the manipulator to pass the leaves more expeditiously through the sieves, and thus economizes labour. After the leaves have thus been sorted, they are again fired and packed in chests containing, according to quality, from 70lbs. to 100 lbs.

The Assam Tea bears a somewhat higher price in the London market than that of China, that is to say, from 3*d.* to 6*d.* per pound.

The following is the rate at which each quality is insured in bond, and which gives the best idea of its relative value:—

				<i>s.</i>	<i>d.</i>
Flowery Pekoe	..	..	..	4	6
Second quality Pekoe	..	..	..	2	6
Souchong	..	..	..	2	3
Congou	..	..	..	1	6
Bohea	..	..	..	1	3

The Assam Company, in addition to their factories in Assam, have established tea gardens in Cachar, in the north-east corner of Bengal. In the former locality, which they have occupied for upwards of twenty years, the quantity of land under cultivation is about 4,000 acres. The gross value of the tea raised in the last year, of which the accounts have been made up, was £76,800, which gives a little less than £20 as the produce of a single acre of land, which heretofore was waste and valueless.

In the more recent experiment in Cachar, the quantity of land placed in cultivation is estimated at about 900 acres, but the plantation is as yet young.

The land available for tea cultivation in the region where it has been prosecuted by the enterprise of the Assam Company is of such vast extent that these operations are susceptible of any degree of expansion.

The land is leased to them by Government at little more than a peppercorn rent, which varies from fourpence halfpenny to nine pence an acre. The sum paid annually for the land cannot therefore be said to have any influence on the cost of the tea. Still, the assurance of obtaining the absolute proprietorship of the tea estates, free from any possible contingency, is calculated to increase the confidence of the public. The Company will, doubtless, therefore take advantage of the regulations proposed by Lord Stanley, and at length adopted by the present Government, redeem the tax on the land they now lease, and purchase outright whatever lands they may hereafter require.

The great obstacle to the enlargement of the Company's operations is the deficiency of labour.

According to the last statement received from Assam, it would appear that the total number of labourers employed by the Company in their establishments in Upper Assam is 5,200. Of these, 1,965 are natives of Cachar, and perhaps 800 from other districts, and scarcely one half the number is from Assam proper. In that

country, as in Aracan and Pegu, the crying want is that of labour. Though it has been generally supposed that Bengal is a pauper warren, yet it is found to be a point of extreme difficulty to induce the native to take his labour to this adjoining province, where it would find a higher remuneration. Yet, strange to say, the men who cannot be persuaded to remove to Assam, are readily embarking for the Mauritius, the West Indies, and even the French colonies, under the stimulus of the energetic system established by the Government of India. With an adequate supply of coolies the productive power of the province would be indefinitely increased.

Encouraged by the success of the Assam Company, various other bodies have been formed for the cultivation of tea in Assam and other localities.

In 1859, there were in all 68 tea factories in Assam, and the total area under cultivation was 7,600 acres. At the end of 1860, it is reported that there were 110 factories, and that the quantity of land either actually in cultivation, or prepared for it, was 21,000 acres.

The entire crop of the past year was estimated at 1,700,000 lbs., and as the quantity which the Assam Company expected to raise was 1,000,000, we have 700,000 lbs. as the produce of the other Companies who have embarked in the enterprise.

In Cachar, a hilly district on the north-eastern border of Bengal, with a very spare population of highlanders, the total amount of the Government revenue, five years ago, was £5,000. There are now 80 English settlers in the district, who are said to expend not less than £60,000, and the public revenue has increased to £20,000. It contains 53 tea plantations, with about 6,000 acres under culture; but as these enterprises are yet in their infancy, the crop of the past year is not estimated at more than 200,000 lbs.

At the sanitarium of Darjeling, and in its neighbourhood, efforts have been made by the Europeans settled there to introduce the cultivation of tea, and, as far as can be ascertained, about 3,000 acres have been planted out, yielding about 62,000 lbs.

For the last twenty years the hills in the north of India have been the scene of very energetic efforts on the part of Government to extend the cultivation of tea. When the subject was first brought under the notice of the Committee of Trade and Agriculture of this Society, that locality was considered by its members as far more favourable for the cultivation than Assam, and the most sanguine expectations of early success were entertained.

Those expectations, however, have not as yet been realized. While the produce of Assam has been augmented twentyfold, the northern nurseries have been stationary. It is said that the difficulties in the way of cultivation are chiefly those connected with the acquisition of land, which even the Fee-simple Resolution of Government does not remove. But the great advantage possessed by Assam, Cachar, and the region to the east of Bengal, over the localities in the remote north, consists in the cheapness and facility of conveyance to the port of Calcutta.

During the past year, 2,000 maunds, of 80 lbs., of tea seed have been distributed from the Government nurseries at and about Saharunpore at the rate of 20 rupees a maund. There are, moreover, now in Kumaon 16 plantations, 25 in Dehra, and 18 in Kangra, besides three companies recently established.

The result of this inquiry regarding the progress of tea cultivation in India therefore stands thus:—In 1840, a few pounds of tea raised in Assam were introduced into England, and considered as great a rarity as the tea sold by Garraway, in 1657, in the coffee-house which still bears his name in Change-alley, when he gave notice that, “to the end that all persons of eminence and quality, gentlemen, and others, who have occasion for tea in leaf may be supplied, the said Thomas Garraway hath tea to sell from 16s. to 50s. the pound.” In 1839, the first parcel of tea from Assam sold from 16s. to 32s. the pound in London. In the course of the last twenty years, 250 tea plantations have been established in the Bengal Presidency, the produce of which in the past year was equal to 2,000,000 of pounds, of the value of about £200,000. The facilities for cultivating it, except in the article of labour, are indefinite. The cultivation is spreading with a rapidity of which there is no former example in India; and wherever the operations are conducted with judgment and economy, upon the basis of experience, the returns are so considerable as to afford the strongest encouragement to the embarkation of capital in the undertaking.